217/782-2113

CONSTRUCTION PERMIT – REVISED

PERMITTEE

Chicago Finished Metals
Attn: Pat Sheen
9900 Industrial Drive
Bridgeview, Illinois 60455

Application No.: 01040013 I.D. No.: 031027AAB
Applicant's Designation: Date Received: April 18, 2003
Subject: Coating Lines
Date Issued: June 26, 2003
Location: 9900 Industrial Drive, Bridgeview

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a modification to existing coating line #2 which consists of a new thermal oxidizer, a new primer oven with a permanent total enclosure, a modification to the existing finisher oven with a permanent total enclosure, and replacement burners for the finish oven on coating line #1 as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1.0 Unit Specific Conditions

1.1 Unit Coating Line #2
Control Permanent Total Enclosure and Thermal Oxidizer

1.1.1 Description

During coating, coils of metal are processed on a continuous strip line consisting of four interconnected sections: cleaning, zinc electro galvanizing, treating, and painting.

1.1.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Coating Line #2	Cleaning, Electrogalvanizing, Treating, and Coating	Thermal Oxidizer, Permanent Total Enclosure

1.1.3 Applicability Provisions and Applicable Regulations

a. An "affected coating line" for the purpose of these unit specific conditions is a coating line as described in Conditions 1.1.1 and 1.1.2.

b. The affected coating line is subject to requirements of 35 IAC 218.207(b)(1), which provides that the coating line shall be equipped with a capture system and control device that provides 81 percent reduction in the overall emissions of VOM from the coating line and the control device has a 90 percent efficiency.

c. The affected coating line is subject to the New Source Performance Standard, 40 CFR 60 Subpart TT: Standards of Performance for Metal Coil Surface Coating.

d. The affected coating line is subject to 35 IAC 212.321(b)(1), which provides that the Permittee shall not cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321(a)].

1.1.4 Non-Applicability of Regulations of Concern

a. The affected coating line is not subject to 35 IAC Subpart G: Use of Organic Material, because the affected coating line is required to meet 35 IAC 218.204 [35 IAC 218.209].

b. The affected coating line is not subject to 40 CFR 63 Subpart N: National Emission Standards for Hazardous Air Pollutants from Chromium Electroplating, because no chromium electroplating performed at this plant.

c. This permit is issued based on the affected coating line not being a new or reconstructed major source of hazardous air pollutants, so that it is not subject to a case-by-case determination of Maximum Achievable Control Technology (MACT), pursuant to Section 112(g) of the Clean Air Act.

1.1.5 Operational and Production Limits and Work Practices

a. The bake oven shall only be operated with natural gas as the fuel.

b. The thermal oxidizer shall be in operation at all times that the associated emission unit(s) is in

operation and utilizing VOM containing materials and emitting VOM. The afterburner shall not be seasonally shut down as would be allowed in 35 IAC 218.107.

c. The afterburner combustion chamber shall be preheated to the manufacturer's recommended temperature but not lower than 1400°F, before the coil coating process is begun, and this temperature shall be maintained during operation of the affected coating line.

d. The permanent total enclosures installed on the primer oven and the finisher oven are considered to meet the requirements of PTE which are established in 35 IAC 218, Appendix B, Procedure T and the capture efficiency of VOM on the primer oven and finisher oven is assumed to be 100 percent.

e. The permanent total enclosures and the afterburner control system shall be operated in a manner consistent to good air pollution control practices.

1.1.6 Emission Limitations

a. The affected coating line shall not cause to be discharged into the atmosphere more than 10 percent of the VOC's applied for each calendar month (90 percent emission reduction) for the affected coating line that continuously uses an emission control device(s) operated at the most recently demonstrated overall efficiency [40 CFR 60.462(a)(3)].

b. Emissions and operation of the affected coating line shall not exceed the following limits:

Coating Usage (gal/hr)	Emissions of VOM (T/Mo)	(T/Yr)
375	7.1	35.19

Actual emissions from the affected coating line for calendar years 1999 and 2000 were 9.831 and 10.75 tons per year, respectively; therefore, the actual emissions representing the average of the two years is 10.29 tons. The annual emission limit of 35.19 tons represents an increase of 24.9 tons above the actual emissions.

c. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

d. The source has addressed the applicability and compliance of 35 IAC Part 203, Major Stationary Sources Construction and Modification. These limits continue to ensure that the construction and/or modification addressed in this construction permit does not constitute a major modification pursuant to these rules.

1.1.7 Testing Requirements

a. The affected coating line must comply with all applicable performance test and compliance provisions specified in 40 CFR 60.463.

b. Within 60 days after achieving the maximum production rate at which the affected coating line will be operated, but not later than September 8, 2002, the Permittee shall conduct performance test(s) and furnish the Illinois EPA a written report of the results of such performance test(s).

c. The test shall be designed to measure the destruction efficiency across the afterburner. In conjunction with this test, the Permittee shall verify that the enclosure meets the criteria for Permanent Total Enclosure in 35 IAC 218, Appendix B, Procedure T, so as to demonstrate the overall control efficiency provided by the combination of the capture system and afterburner.

1.1.8 Monitoring Requirements

a. Pursuant to 35 IAC 218.105(d)(2)(A)(i), the thermal oxidizer shall be equipped with a USEPA approved continuous monitoring device which is installed, calibrated, maintained, and operated according to vendor specifications at all times the afterburner is in use. This monitoring equipment shall monitor the combustion chamber temperature of each afterburner.

b. The Permittee shall install, calibrate, operate, and maintain a thermal oxidizer on the affected coating line that continuously records the combustion temperature of any effluent gases incinerated to achieve compliance with 40 CFR 60.462(a)(2) and (3) and Condition 1.1.6(a) of this permit. The thermal oxidizer shall have an accuracy of ±2.5°C or ±0.75 percent of the temperature being measured expressed in degrees Celsius, which is greater. The Permittee shall also record all periods (during actual coating operations) in excess of 3 hours during which the

average temperature in the thermal oxidizer used to control emissions from an affected coating line remains more than 28°C (50°F) below the temperature at which compliance with 40 CFR 60.462(a)(2) and (3) was demonstrated during the most recent measurement of oxidizer efficiency required by 40 CFR 60.8. The records required by 40 CFR 60.7 shall identify each such occurrence and its duration [40 CFR 60.464(c)].

1.1.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for the affected coating line to demonstrate compliance with conditions of this permit:

a. Pursuant to 35 IAC 218.211(e)(2), the Permittee shall collect and record all of the following information each day for each coating line and maintain the information at the source:

   i. Control device monitoring data;

   ii. A log of operating time for the capture system, thermal oxidizer, monitoring equipment and the associated coating line; and

   iii. A maintenance log for the capture system, thermal oxidizer and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.

b. The Permittee shall maintain at the source records of all data and calculations used to determine monthly VOC emissions from the affected coating line and to determine the monthly emission limit, where applicable. Where compliance is achieved through the use of thermal oxidizer, the Permittee shall maintain, at the source, daily records of the of the oxidizer combustion temperature [40 CFR 60.465(e)].

c. The name and identification number of each coating and clean-up solvent as applied on the affected coating line;

d. The usage of each coating, in units of gallons/month and gallons/year;

e. The Permittee shall keep records of the total monthly and annual coatings used (gal/month and gal/year) and hours of operation per year;

f. The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM), as applied each month on the affected coating line;

g. Density of each applied coating and cleanup solvent, in units lb/gal;

h. The usage of clean-up solvent, in units of gallons/month and gallons/year;

i. The weight of VOM per volume of each cleanup solvent, in units lb/gallon, as applied each month on the affected coating line;

j. The amount of paint containing waste (off-site manifested waste from the coating and cleaning operations) generated and solvent reclaimed on each affected line in units gallons/month;

k. The average density lb/gal and Wt.% of VOM in generated paint containing manifested waste

l. Records of natural gas usage, in units mmscf/month and mmscf/year; and

m. Total VOM, PM and NOx emissions in tons/month and tons/year from both affected lines calculated based on the recordkeeping and compliance procedures from Condition 1.1.12.

1.1.10 Reporting Requirements

a. The Permittee shall promptly notify the Illinois EPA, Compliance Section, of noncompliance of the affected coating line with the permit requirements as follows. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

Pursuant to 35 IAC 218.211(e)(3), the Permittee shall notify the Illinois EPA in the following instances:

i. Any record showing violation of 35 IAC 218.207 and Condition 1.1.3(b) within 30 days of such an occurrence.

ii. At least 30 calendar days before changing the method of compliance from 35 IAC 218.207 to 35 IAC 218.204 or 205, the Permittee shall comply with all requirements of 35 IAC 218.211(c)(1) and (d)(1).

b. Following the initial performance test, the Permittee shall identify, record, and submit a written report to the Illinois EPA every calendar quarter of each instance in which the volume-weighted average of the local mass of VOC's emitted to the atmospheric per volume of applied coating solids (N) on the affected coating line is greater than the limit specified under 40 CFR 69.462 and Condition 1.1.6(a). If no such instances have occurred during a particular quarter, a report stating this shall be submitted to the Illinois EPA semiannually [40 CFR 60.465(c)].

c. The Permittee shall also submit reports at the frequency specified in 40 CFR 60.7(c) when the thermal oxidizer temperature drops as defined under 40 CFR 60.464(c) and Condition 1.1.8(b). If no such periods occur, the Permittee shall state this in the report [40 CFR 60.465(d)].

d. At least 60 days prior to the actual date of testing, a written test plan shall be submitted to the Compliance Section of the Division of Air Pollution Control for review. This plan shall describe the specific procedures for testing, including as a minimum:

   i. The person(s) who will be performing sampling and analysis and their experience with similar tests.

   ii. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the emission unit and any control equipment will be determined.

   iii. The specific determinations of emissions and operation which are intended to be made, including sampling and monitoring locations.

   iv. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods.

   v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.

   vi. Any proposed use of an alternative test method, with detailed justification.

vii. The format and content of the Source Test Report.

e. Copies of the Final Report(s) for these tests shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized. The Final Report shall include as a minimum:

i. A summary of results

ii. General information

iii. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule

iv. Detailed description of test conditions, including

A. Process information, i.e., mode(s) of operation, process rate, e.g. fuel or raw material consumption

B. Control equipment information, i.e., equipment condition and operating parameters during testing, and

C. A discussion of any preparatory actions taken, i.e., inspections, maintenance and repair

v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration

vi. An explanation of any discrepancies among individual tests or anomalous data

f. Two copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

g. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification of the expected date of testing shall be submitted a minimum of 30 days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

1.1.11 Operational Flexibility/Anticipated Operating Scenarios

None

1.1.12 Compliance Procedures

a. Compliance of the affected coating line with the emission limitations in Condition 1.1.6(a), 40 CFR 60.462(a)(2), and Condition 1.1.3(b) shall be based on the recordkeeping requirements in Condition 1.1.9 and the compliance provisions specified in 40 CFR 60.463(c)(2).

b. Compliance of the affected coating line with VOM emission limitations in Condition 1.1.6(b) shall be based on the recordkeeping requirements in Condition 1.1.9 and by use of the formula listed below:

The VOM Emissions from the affected coating line shall be calculated based on the following equation:

Emissions from Coating Operation (EI) = [Actual Coating Usage (gal/mo) x Coating Density (lb/gal) x VOM Content of the Coating (Wt.%)] x [1 – (overall control efficiency/100)] - [Paint Containing Waste (gal/mo) x Waste Density (lb/gal) x VOM Content in Waste (Wt.%)];

c. To determine compliance with Condition 5.5.1 of the source's CAAPP permit, emissions of NO_x, PM, SO_2 and

VOM from ovens and afterburner burning natural gas shall be calculated based on the standard emission factors for natural gas combustion from AP-42:

Pollutant	Natural Gas Emission Factors ($lb/10^6$ ft^3)
PM	7.6
NO_x	100
SO_2	0.6
VOM	5.5

These are the emission factors for uncontrolled natural gas combustion in small boilers (<100 MBtu/hr), Tables 1.4-1 and 1.4-2, Volume I, March, 1998.

Emissions (lb) = natural gas consumed multiplied by the appropriate emission factor.

2. The coating line #2 and replacement burner for the finish oven on coating line #1 may be operated under this construction permit until renewal of the CAAPP permit or a modification of the CAAPP permit has been issued provided a timely application is submitted to amend the CAAPP permit to incorporate the abovementioned equipment.

3. This permit is issued based upon no increase of volatile organic material from the replacement burners for the finish oven on coating line #1.

Please note that the affected coating line covered by this permit may be subject to the National Emission Standards for Hazardous Air Pollutants: Metal Coil Coating, proposed on July 18, 2000, by the United States Environmental Protection Agency. These standards will become effective upon promulgation.

It should be noted that this permit has been revised to include replacement burners for the finish oven on coating line #1.

If you have any questions on this, please call Jason Schnepp at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:JMS:psj

cc: Region 1
Lotus Notes